

ABSTRACT OF THE DISCLOSURE

A positive active material is provided. The positive active material includes particles of lithium nickelate and an olivine compound having an olivine crystal structure, wherein surfaces of the particles of lithium nickelate are covered with the
5 olivine compound. The lithium nickelate is expressed by a general formula $\text{Li}_y\text{Ni}_{1-z}\text{M}'_z\text{O}_2$ where $0.05 \leq y \leq 1.2$ and $0 \leq z \leq 0.5$, and M' includes Fe, Co, Mn, Cu, Zn, Al, Sn, B, Ga, Cr, V, Ti, Mg, Ca, Sr and mixtures thereof. The olivine compound is expressed by a general formula Li_xMPO_4 where $0.05 \leq x \leq 1.2$, and M includes Fe, Mn, Co, Ni, Cu, Zn, Mg and mixtures thereof. A non-aqueous electrolyte secondary
10 battery using the positive active material has a high discharge capacity and a good high-temperature stability because of the combination of advantages of lithium nickelate and the olivine compound of the positive active material.